

XX. *Notes on new or interesting species of Papilionidæ and Pieridæ, collected by Mr. Buckley in Eastern Ecuador.* By W. F. KIRBY.

[Read July 6th, 1881.]

SOME months ago Mr. Henley Grose Smith placed in my hands a portion of the fine collection of butterflies collected by Mr. Buckley in Ecuador. It was originally intended to publish a list of all the species obtained, but pressure of other work prevented me from completing it; and I now, by permission of Mr. Smith, lay before the Society the notes which I made on the more interesting *Papilionidæ* and *Pieridæ*. The types of the new species are in the collection of Mr. Smith. I am indebted to Mr. Buckley for notes on localities, &c.

*Papilio Euterpinus*, Salv. & Godm.

*P. Euterpinus*, Salv. & Godm., Ann. Nat. Hist. (4), ii. p. 150, n. 24 (1868); Hew., Exot. Butt. iv. *Pap.*, pl. x., fig. 31 (1869).

Mr. Buckley was too late for this species, and only met with worn females. They are brown, with the cell and a wide band between it and the inner margin ochreous-yellow. As far as I can judge from the condition of the specimens, it does not quite extend to the hind margin, nor to the anal vein; much less to the inner margin.

Inhabits moist places at a high elevation. Chiquinda.

*Papilio Lacydes*, Hew.

*P. Lacydes*, Hew., Equat. Lep. i. p. 1 (1869).  
*P. Erithalion*, aberr. *Equestris*, Oberthür, Études Ent. iv. p. 88, pl. v., fig. 2 (1880).

Several specimens of this little-known species. The insect which I describe below is supposed to be the male.

Black, with a large dull green spot on the inner margin, of a long narrow pear-shape, the thin end directed towards the base; hind wings with white incisions, and with three scarlet spots shot with violet, not close to the anal angle; the outermost is round, and the others larger, and oval. Under side black; base spotted with red, and a red belt near the extremity of the abdomen. Hind wings with five spots, the two outermost pale pink and slightly oval, the fifth of the same colour, but merely indicated; the two nearest the anal angle white, and smaller than the two outer ones.

Sarayacu and Chiquinda.

*Papilio Virginia*, n. s.

Allied to *P. Lacydes*, Hew.

Expands  $3\frac{1}{2}$  inches. Dark brown; fore wings with a broad white band crossing the end of the cell, the lower angle of which it touches, and then widening outwards towards the middle of the inner margin, which, however, it does not reach. Hind wings with white incisions, and a row of seven white transverse spots; spots four to six more oval and larger than the others, but spot five much the largest; spot seven at the anal angle, wide, and tinged below with rose-colour. Under side similar, but paler, and spotted with red at the base; the anal spot on the hind wings divided into two, the first red and white, and the second red.

Banks of the Copataza River, which flows into the Pastaza River.

*Papilio Charoba*, n. s.

Expands  $3\frac{1}{2}$  inches. Black; fore wings with a suffused yellowish white band running from the inner margin parallel with the hind margin for half the breadth of the wing. The upper portion is narrowed, and greenish. Hind wings with five oval scarlet spots running from the anal angle; inner margin narrowly edged with scarlet; incisions white. Under side paler, base spotted with red; band of the fore wings reduced to two white spots, and an indistinct suffusion beyond; hind wings with five small pale pink spots.

Allied to *P. Cyamon*, Gray, but the pale band of the fore wings is shorter, broader, and less sharply defined;

and *P. Cyamon* has four spots on the hind wings above and six below, instead of five on both surfaces.

Pastazza River.

*Papilio Chinsiades*, Westw.

*P. Chinsiades*, Westw., Trans. Ent. Soc. Lond. 1872, p. 101, pl. v., figs. 4, 5.

Rather smaller than in the figure, and with an additional spot on the hind wings, making two rows of three each.

Sarayacu, &c.

*Papilio Drucei*, Butl.

*P. Drucei*, Butl., Trans. Ent. Soc. Lond. 1874, p. 434, pl. vi., fig. 2.

The green band of the fore wings is broader than in the type. In one specimen it is marked with a white spot, which reappears on the under surface.

Woods and banks of streams, Canelos.

*Papilio Cutora*, Gray.

*P. Cutora*, Gray, Cat. Lep. Ins. B. M. p. 58, pl. x.\*, fig. 6 (1832).

*P. Vertumnus*, var. *Cutora*, Bates, Trans. Ent. Soc. Lond. (2), vol. 5, p. 440 (1861).

The male differs from the type, but agrees with the variety mentioned by Bates, in the spots of the under surface of the hind wings being yellow instead of red. The red spot of the upper surface is smaller than in Gray's figure; and the green spot of the fore wings is also smaller and not marked with white.

Common everywhere.

*Papilio Xeniaades*, Hew.

*P. Xeniaades*, Hew., Trans. Ent. Soc. Lond. (3), vol. 5, p. 561 (1867); Exot. Butt. iv. *Pap.* pl. ix., fig. 26 (1868).

Varies considerably in size, and in the number of spots on the hind wings. There are sometimes only

two, and sometimes three, four, five, or six. This insect is hardly distinct from *P. Gayi*, Luc.

River Topo.

*Papilio Isidorus*, Doubl.

*P. Isidorus*, Doubl., Ann. Nat. Hist., vol. xviii. p. 375 (1846); Gray, Cat. Lep. Ins. B. M. i. p. 63, pl. vii. fig. 4 (1852).

The red spots are a little smaller than in Gray's figure.

Common everywhere.

*Archonias Colla*, Doubl.

*Euterpe Colla*, Doubl., Ann. Nat. Hist. xix. p. 188 (1847).

*E. Philais*, Felder, is perhaps the same species.

St. Inez.

*Archonias Suadela*, Hopff.

*Euterpe Suadela*, Hopff., Stett. Ent. Zeit. 1874, p. 329; 1879, p. 55.

Stands in Mr. Hewitson's collection as *E. Pinava*, Doubl.

St. Inez.

*Archonias Chelidonis*, Hopff.

*Euterpe Chelidonis*, Hopff., Stett. Ent. Zeit. 1874, p. 330; 1879, p. 58.

Stands in Mr. Hewitson's collection as *E. Zara*, Boisd., which appears to be a MS. name.

St. Inez.

*Archonias Eurytele*, Hew.

*Euterpe Eurytele*, Hew., Exot. Butt. i. Ent. and Lep., pl. i. fig. 1 (1852).

Much larger than the type.

Always found near rivers, on wet sand or shingle, Canelos, &c.

*Dismorphia Leonora*, Hew.

*Leptalis Leonora*, Hew., Equat. Lep. p. 7 (1869); Exot. Butt. iv. Lep., pl. vi. figs. 39—41 (1870).

A variety with the black border of the hind wings ceasing abruptly about the middle of the hind margin.

Found on a muddy path between St. Inez and the Topo.

*Dismorphia Hewitsonii*, n. s.

Expands 2 inches 4 lines—2 inches 8 lines.

Allied to *D. Rhetes*, Hew., which Mr. Hewitson described and figured from a Colombian specimen in Boisduval's collection, but which is represented in his own by the present species.

Fore wings black; a large irregular lilac band runs from the base, divided into three by the nervures; the first long and narrow, running along the lower side of the discoidal cell; the second forms an obtuse-angled triangle, starting with the first from the base, and ceasing at about one-third of the length of the last, which fills up nearly the whole space between the second and third median nervules, but is narrowed above beyond the middle, and ends in a point before quite reaching the hind margin; below it are two smaller long spots near the hind margin. On the costa is a white spot before the end of the cell, beyond and below which is a band of two white and two lilac increasing spots, only separated by the veins; beyond this is another row of five smaller white spots, beginning with two connected ones on the costa; the rest well separated. Hind wings bluish hyaline, with a black indented border; the cell filled up with rufous-brown, edged with blackish below; the wing beyond is whiter, and stained with rufous. Under surface tawny brown; fore wings bluish white below the middle of the cell, and the same colour curves round its extremity. A large bluish white spot on the costa before the end of the cell; the outer row of five spots is also present, and there are two more at the extremity of the wing; hind wings silvery white; costa fawn-colour; cell fawn-colour, edged on both sides with black, and the upper black stripe running to the subcostal nervure in a right angle at its extremity; border of the wings fawn-colour, edged below with blackish, which runs triangularly upwards towards the extremity of the cell; tip with three small white spots. Female similar; cell of the hind wings black, edged with lilac-white; under surface with the hind wing cell only

edged with black above, and with a short fawn-coloured band instead of a black one running from its extremity to the costa.

Chiquinda.

*Dismorphia Medora*, Doubl.

*Leptalis Medora*, Doubl., Ann. Nat. Hist. xiv. p. 420 (1844); Doubl. & Hew., Gen. D. Lep. pl. v. fig. 4 (1847).

Appears to be a somewhat variable species.

Baños, at the foot of Mount Tungaragua.

*Dismorphia Hyposticta*, Feld.

*Leptalis Hyposticta*, Feld., Wien. Ent. Mon. v. p. 77, n. 20 (1861); Reise Nov. Lep. ii. p. 142, pl. xxii. f. 7, 8 (1865).

♂. Fore wings black, with an irregular yellow band divided into four spots by the nervures crossing the end of the cell, one on the costa, one within, and one beyond the cell, and the fourth below; three yellow dots nearer the tip, and a yellow stripe on the hind margin. Hind wings pale yellow, with a decreasing black border, indented on the inner side, and ceasing at the outer angle of the wing. Under side of fore wings greenish white; costa with a longitudinal rusty streak at base of costa, an irregular blotch of the same colour on the costa at the end of the cell; and the nervules on the hind margin suffused with rust-colour, and spotted with yellow between. Under side of hind wings as in the female.

Valley of Curarai.

*Dismorphia Arcadia*, Feld.

*Leptalis Arcadia*, Feld., Wien. Ent. Mon. vi. p. 410 (1862); Reise Nov. Lep. ii. p. 141, pl. xxii. figs. 1—3 (1865).

Several specimens, varying considerably among themselves, but none agreeing exactly with Felder's figures.

Mapoto, between Baños and St. Inez.

*Dismorphia Ela*, Hew.

*Leptalis Ela*, Hew., *Equat. Lep.* p. 82 (1877).

The under side of the hind wings varies considerably ; sometimes there is a reddish line within the black white-spotted border ; sometimes a yellow one, joining the yellow stripe on the costa ; and sometimes there is no pale stripe at all.

Canelos.

*Dismorphia Orise*, Boisd.

*Leptalis Orise*, Boisd., *Sp. Gén. i.* p. 415 (1836) ; Hew., *Exot. Butt. ii. Lep.*, pl. 2, f. 10, 11 (1857).

Several specimens in woods on mountain sides. Grana-dillas.

*Pieris Imperator*, n. s.

Expands  $3\frac{1}{2}$  inches. Allied to *P. Phaloe*, Godt.

White ; fore wings with a black spot at the end of the cell, and the tip black, as far as the outer third of the costa, and to beyond the middle of the hind margin ; the extremities of all the nervules black, and the neighbourhood of the lower ones speckled with dusky on the hind wings ; under surface of fore wings with the costa ashy, and the apical spot ashy, and not extending along the hind margin ; hind wings beneath pearly white ; costa orange at the base ; all the veins black, and with black lines running between them ; a black band formed chiefly of dark scaling runs along the subcostal and first subcostal nervures from the base to the hind margin, and a broad lunule of similar character rests its upper and outer portion on the extremity of the discoidal cell.

The only species of this group of *Pieris* met with.

River banks, Copataza ; also inhabits Bolivia.

*Pieris Smithii*, n. s.

Expands 1 inch 10 lines.

Sulphur-yellow, base dusted with black ; costa black as far as the end of the cell, the colour extending over the upper half of the cell. Beyond this the costa is very narrowly edged with black till it meets the black border, which is deeply excavated opposite the cell, and

grows very narrow towards the anal angle, at which it ceases. Hind wings with black dots at the ends of the nervules, above and below. Under side of fore wings yellowish; the tip, as well as the hind wings, pearly white; cell of the hind wings broad, terminating in two black angular marks.

Allied to *P. Eleone*, from which it differs in the form of the band.

Flying about the sulphur spring at Baños.

*Colias Dinora*, n. s.

Expands 1 inch 8 lines.

Curiously resembles *C. Hyale*, and also *C. Dimera*, var. *Semperi*, Reak; figured by Strecker, Lep. pl. iv. fig. 4.

Pale yellow; fore wings with a black spot at the end of the cell, and with a decreasing black border, indented on the inside, and marked with a row of four nearly continuous yellow spots, preceded by a yellow streak on the costa nearer the base. Hind wings with a narrow black border, not extending beyond the middle of the hind margin. All the fringes rosy, as well as the head, antennæ, and legs. Under surface: fore wings with the black spot centred with white, and with a row of indistinct reddish spots nearer the hind margin; hind wings with a similar row of spots, but more distinct, and with a silvery spot surrounded with reddish at the end of the cell; there is also a reddish basal streak running along the lower side of the discoidal cell for half its length.

Found just below Chimborazo.